Object Oriented Programming

Week 8 Part 3
java.nio

Lecture

- IO Packages: java.nio vs java.io
- Paths
- Opening Files
- Buffered Files

Packages: java.nio vs java.io

Difference between nio and io

- Java has two different file IO packages
- java.io: byte, character, data, and object streams
    - Since 1.0 (1996)
- java.nio: buffered streams, non-blocking IO, selectors
    - Since 1.4 (2002)
    - Paths
    - Non-blocking I/O
    - Network Oriented

Channels instead of Stream

- FileChannel: data comes from file

- DatagramChannel: data comes from unprocessed network connection

- SocketChannel: data comes from processed network connection

- ServerSocketChannel: data comes from processed connection that is set up when a client calls

Paths

- Instead of opening a file, you create a path
  - The path knows if it is MS or Unix
  - The path may use wildcards E.g., ?, *)
  - Operations can be done on a Path
    - Files.delete(path)
    - Files.copy(sourcePath, destinatinPath, replaceExisting?)
    - Files.move(sourcePath, destinatinPath, replaceExisting?)
    - Check file attributes (e.g., size, is_directory, owner …)
  - Read and write to files pointed to by paths
  - Create and read directories pointed to by paths